

MISO Transmission Planning Update

Jan-21-2015

Overview

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MTEP14 Review

2

MTEP 15 Preview

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Key Takeaways

MTEP 2014 Summary

The MISO Board approved MTEP14 on Dec 11, 2014

MTEP14 includes 369 newly approved projects
- totaling \$2.5 billion investment

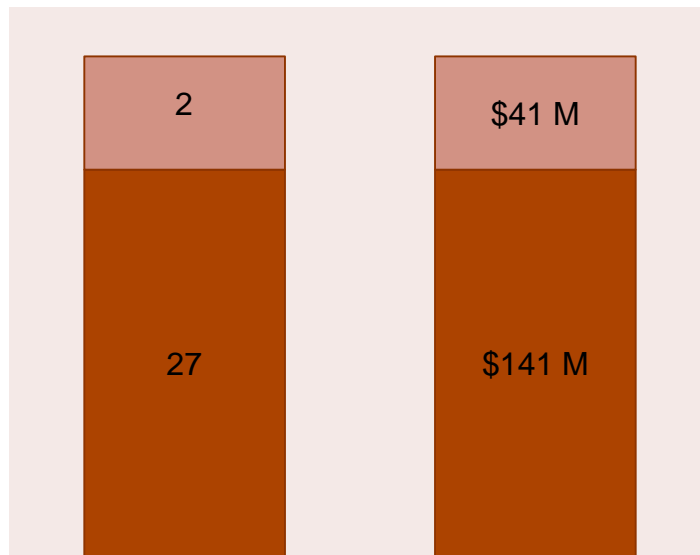
First MISO transmission planning cycle to include the full participation of the MISO South Region

The South Region accounts for \$359.2 million in new projects



Approved Projects in Louisiana

- In MTEP2014 – 29 new projects, \$182 Million were approved by MISO Board of Directors



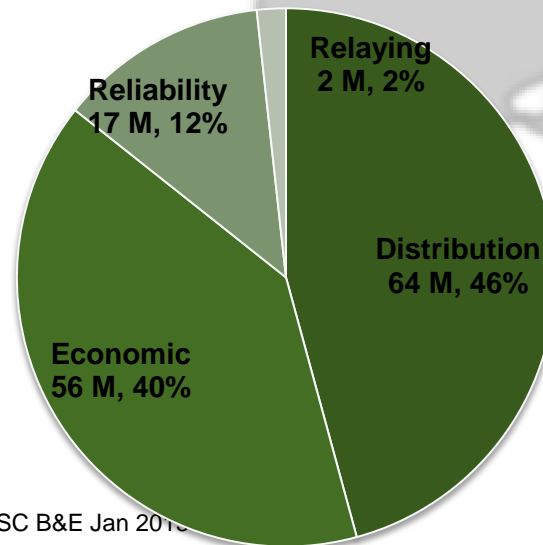
Project Count

Project Cost

■ Baseline Reliability

■ Other (Driven by Local Needs)

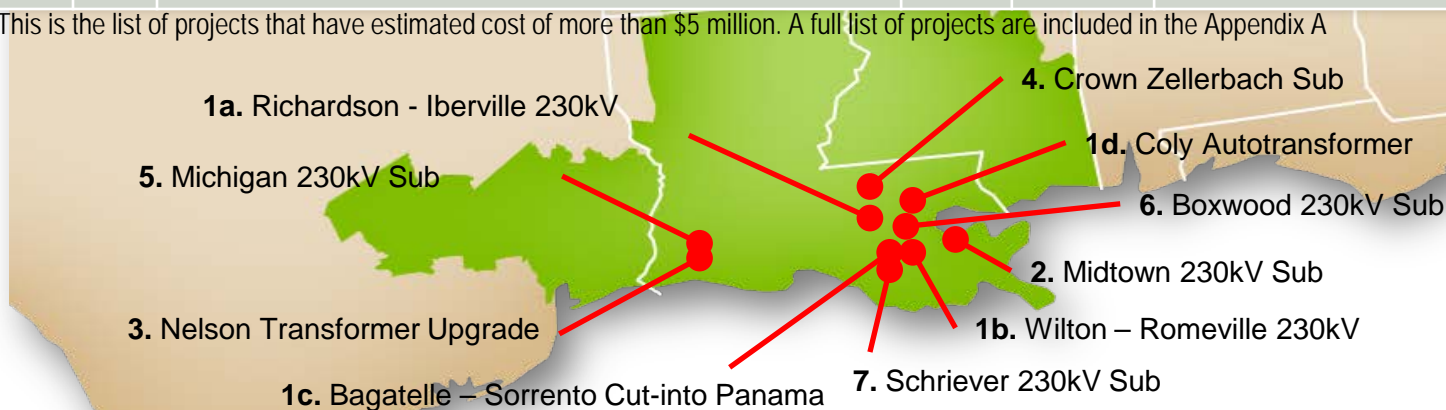
Subtype Breakdown of Other Projects



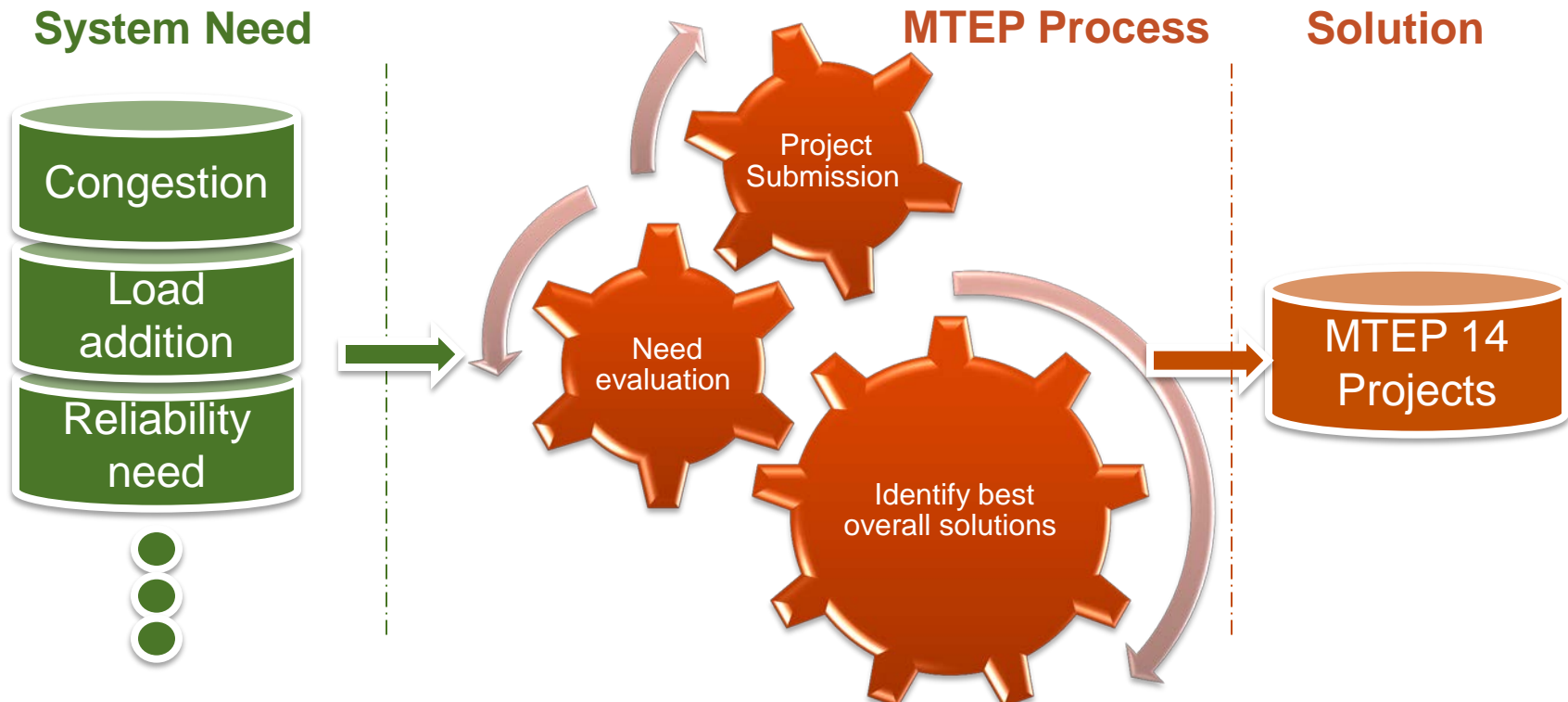
Louisiana MTEP14 Project Highlights

Rank by Cost *	ID	Project Description	Cost (\$M)	Type	Impact
1	8284	Richardson - Iberville 230kV & Bagatelle – Sorrento 230kV cut-in to Panama 230kV & Coly 500/230kV transformer & Upgrade Wilton – Romeville 230kV	\$56	Economic	Reduce congestion
2	4794	Midtown 230 KV transformer (Entergy New Orleans)	\$27	Load Srv	Improve load serving capability in the industrial load growth areas
3	4625	Nelson transformer upgrade	\$21	Reliability	Improve system reliability
4	4605	Crown Zellerbach area substation	\$20	Reliability	
5	4720	Michigan 230 kV substation	\$15	Load Srv	Improve load serving capability in the industrial load growth areas
6	4768	Boxwood 230 kV substation	\$11	Load Srv	
7	4769	Schriever 230 kV substation	\$9	Load Srv	

* Note: This is the list of projects that have estimated cost of more than \$5 million. A full list of projects are included in the Appendix A

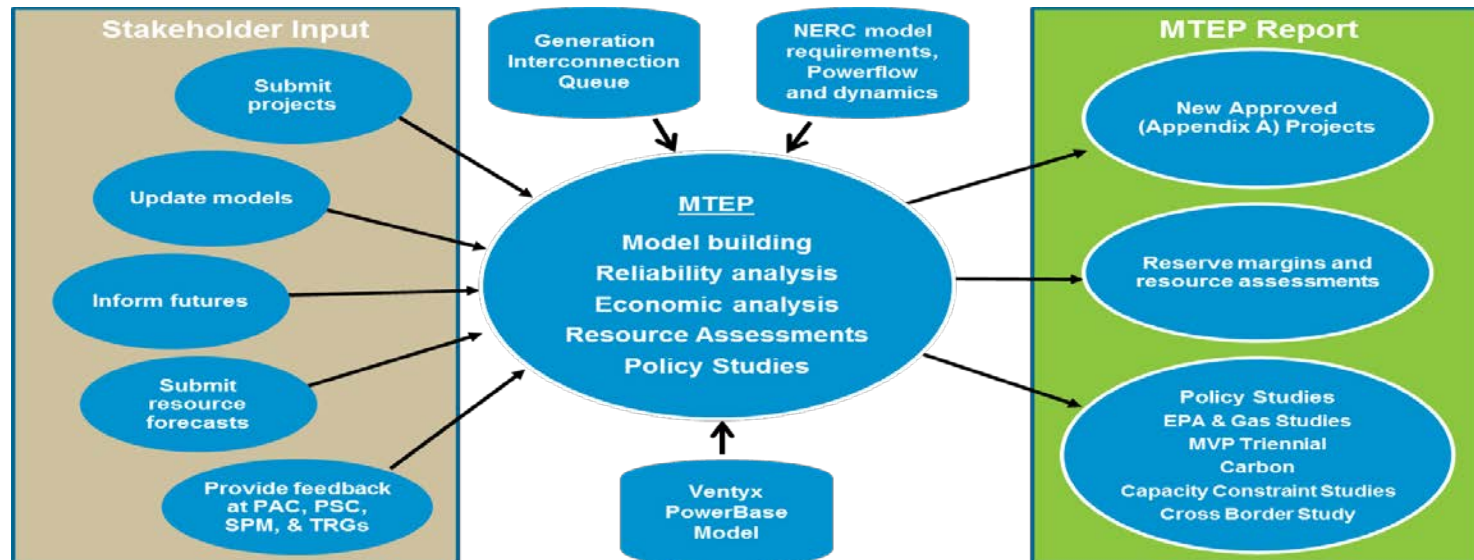


Impact and Indication



- ❑ For local projects without regional cost allocation, MISO does **not** perform rate projections
 - ❑ All the MTEP 14 approved projects in LA are “Local” projects
 - ❑ No regional cost allocation
- ❑ For cost shared projects, MISO does perform rate projection

Stakeholder Participation



- Extensive stakeholder discussion
- Stakeholder input helped shape the study results, investment, and outcomes
- Balance between data transparency and customer confidentiality

MTEP Stakeholder Forums

MISO Board of Directors

System Planning Committee of the MISO Board of Directors

- Monitors and evaluates MISO on the company's oversight and enhancement of the transmission system
- Makes recommendations to the MISO Board of Directors regarding the MISO Transmission Expansion Plan

Planning Advisory Committee

- Oversee and advise MISO on policy matters, integration and fairness of MISO's expansion plan and associated cost allocations
- Review report, offer formal feedback to MISO's Board of Directors, including motion regarding approval.

Planning Subcommittee

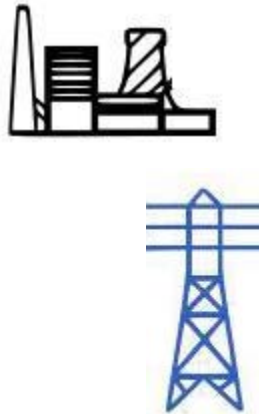
- Review technical guidance on study methodologies, general study updates
- Meets once every other month

Subregional Planning Meetings

- Develop detailed technical presentation of studied plans
- Meets September, December, March and June
- Also includes a number of locally focused Technical Study Task Force Meetings, as needed

After Board Approval...

MISO Board of Director approval establishes projects expected to move forward to implementation as a part of the regional plan, subject to all necessary State and Local regulatory approval processes.



- Approved Appendix A – Projects approved by MISO BOD
- Target Appendix A – Under review in the current MTEP cycle
- Appendix B – Uncommitted Projects for TPL Compliance

MTEP 15

Initial Proposed Projects

- CLECO submitted 4 proposed projects into MTEP15
- Entergy Louisiana submitted 35 proposed projects into MTEP database
 - ELL, ENOI, and EGSL proposed 16 projects moving to Appendix A in MTEP15

Continue stakeholder involvement

- MISO planning forums
- Increased participation
- Wider acceptance of MTEP process across MISO South footprint;
- Continue to work on stakeholder education and involvement in the planning process
 - Workshops
 - Various planning forums

Lake Charles Transmission Projects

Entergy and MISO continue to plan to meet emerging new load additions and enhance reliability

Entergy has submitted a proposed project in the Lake Charles area to meet a new load addition request for service and enhance reliability in this area

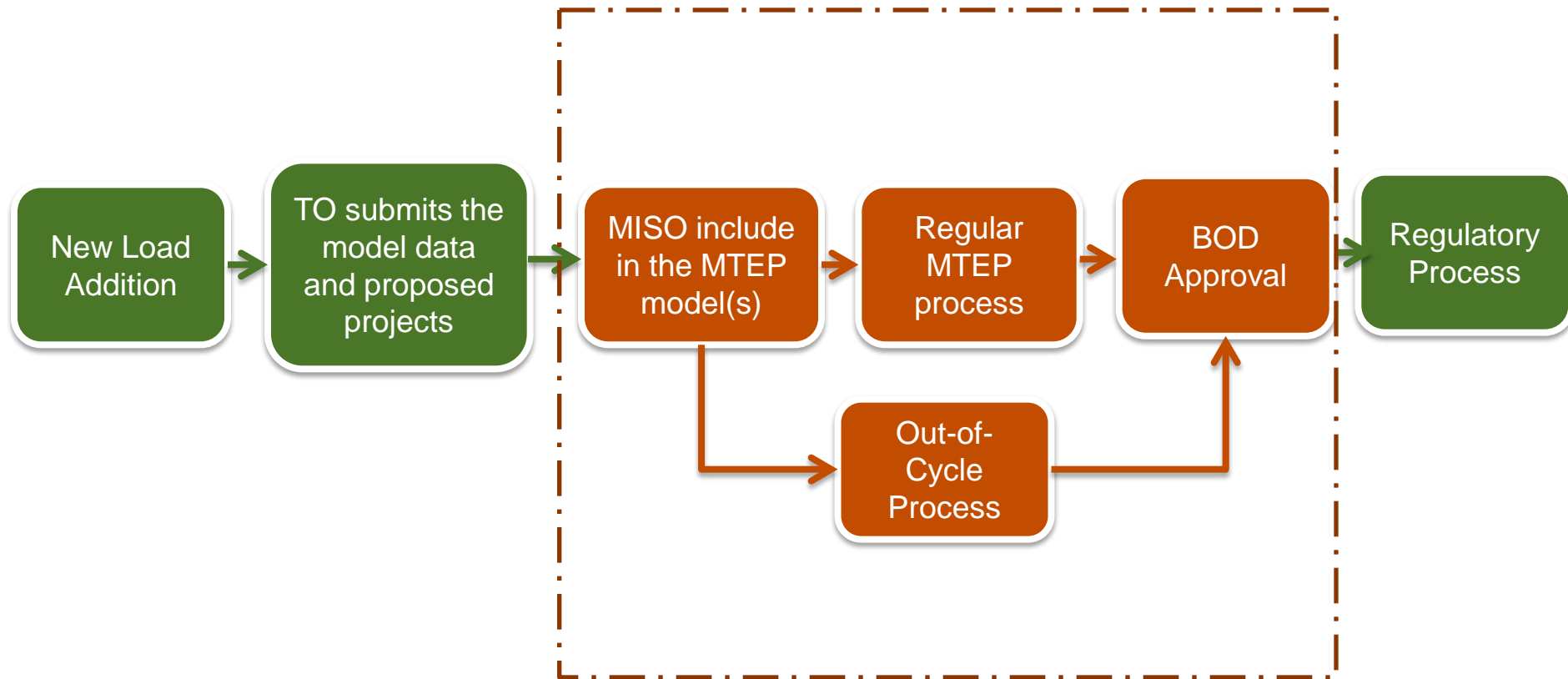
This project is expected to reduce VLR unit commitments in the area

MISO is evaluating this project on an expedited basis to ensure that new load commitments will be met and the project is coordinated with other planning efforts

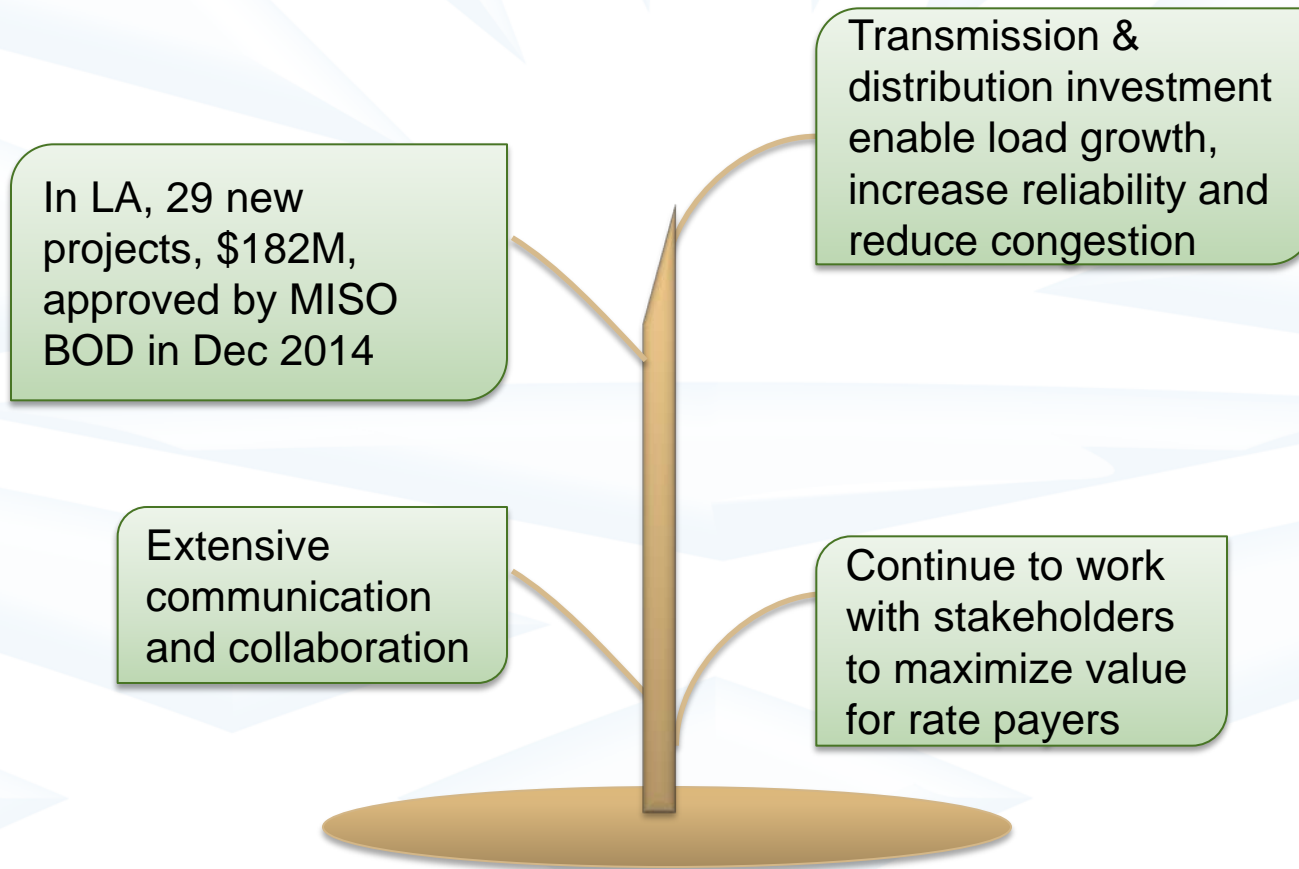
- ❑ The required in-service date - June 1, 2018
- ❑ Estimated cost \$187 Million

- Sulphur Lane 500kV Switching Station
- 500 kV line Sulphur Lane - new Bulk Station (7 mi)
- 500/230 kV Bulk Station
 - 1200MVA, 500/230 kV autotransformer
- 230 kV line Bulk Station - Carlyss (2 mi)
- Reconfigure the Carlyss substation
- 230 kV line Carlyss - Graywood (12 mi)

Planning Process to Address Load Growth



Key Takeaways



Appendix A - MTEP14 Approved Projects (Louisiana)

PrjID	Project Name	Allocation Type per FF	Other Type	Estimated Cost	Expected In-Service Date
8284	Richardson to Iberville 230 kV line; Add second Coly 500/230 kV autotransformer; Bagatelle - Sorrento cut-in to Panama; Upgrade Wilton - Romeville 230 kV line	Other	Economic	\$56,278,053	12/1/2017
4719	PPG to Rosebluff 230 kV Line: Upgrade line to increase capacity	Other	Distribution	\$3,000,000	7/1/2015
4794	Midtown: Add 230 kV distribution transformers	Other	Distribution	\$27,300,000	12/1/2014
4761	EGSL SPOF Projects: Modify relaying at Willow Glen 500 kV	Other	Relaying	\$200,700	6/1/2015
4762	EGSL SPOF Projects: Modify relaying at Fancy Point 500kV	Other	Relaying	\$250,000	6/1/2015
4763	EGSL Underrated Breaker Project: Jaguar 69 kV 20940-CO	Other	Reliability	\$1,480,000	12/1/2016
4764	EGSL Underrated Breaker Project: Jaguar 69 kV 20905-CO	Other	Reliability	\$0	12/1/2016
4765	EGSL Underrated Breaker Project: Blount 69 kV 14105-TC	Other	Reliability	\$0	12/1/2016
4766	EGSL Underrated Breaker Project: Coly 230 kV 21825-C	Other	Reliability	\$0	12/1/2016
4767	EGSL Underrated Breaker Project: Coly 230 kV 21830-C	Other	Reliability	\$0	12/1/2016
4625	Nelson: Upgrade 500-230 kV single phase transformer bank with 1200 MVA transformer bank	BaseRel		\$21,000,000	6/1/2017
4605	Crown Zellerbach Area: Construct new 230-138 kV substation on the Fancy Point to Waterloo 230 kV line	BaseRel		\$20,200,000	6/1/2017
4770	ELL Underrated Breaker Project: Waterford 230 kV S7145-CO	Other	Reliability	\$1,082,000	12/1/2016
4771	ELL Underrated Breaker Project: Waterford 230 kV S7154-CO	Other	Reliability	\$0	12/1/2016
4772	ELL Underrated Breaker Project: Ninemile 115 kV S6342-CO	Other	Reliability	\$0	12/1/2016
4773	ELL SPOF Projects: Modify relaying at Ninemile 230 kV	Other	Relaying	\$2,003,500	6/1/2015
4774	ELL SPOF Projects: Modify relaying at Southport 230 kV	Other	Relaying	\$0	6/1/2015
4775	ELL SPOF Projects: Modify relaying at Labarre 230 kV	Other	Relaying	\$0	6/1/2015
4776	ELL SPOF Projects: Modify relaying at Harahan 230 kV	Other	Relaying	\$0	6/1/2015
4777	ELL SPOF Projects: Modify relaying at Paris 230 kV	Other	Relaying	\$0	6/1/2015
4778	ENOI SPOF Projects: Modify relaying at Market Street 230 kV	Other	Relaying	\$0	6/1/2015
4783	Haute 115 kV Substation: Construct new substation and cut into existing Lutchter to Belle Point 115 kV line	Other	Distribution	\$2,553,000	4/1/2015
4720	Michigan 230 kV substation: Construct new Michigan 230 kV substation and cut in to the Nelson to Verdine 230 kV line	Other	Reliability	\$14,700,000	6/1/2015
4768	Boxwood 230 kV Substation: Cut-in new substation on the Willow Glen to Brittany 230 kV line	Other	Distribution	\$10,943,000	12/1/2014
4795	ENOI Underrated Breaker Project: Claiborne 115 kV N0143-ICBO	Other	Reliability	\$489,600	12/1/2014
4796	ENOI Underrated Breaker Project: Claiborn 115 kV N0123-ICBO	Other	Reliability	\$0	12/1/2014
7841	Reese 115 kV: New Substation	Other	Distribution	\$3,700,000	3/1/2015
4769	Schriever: Construct new 230 kV substation	Other	Distribution	\$9,391,000	12/1/2017
4784	Derrick 230 kV Substation: Construct new 230 kV substation and cut into Iberville to Chenango 230 kV line	Other	Distribution	\$7,650,000	5/16/2014

Appendix B - Lake Charles Transmission

